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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,624	10/24/2003	James David Frost	62004-1791	1506
24504	7590	07/12/2006	EXAMINER	
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948			RAEVIS, ROBERT R	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/693,624

Applicant(s)

FROST ET AL.

Examiner

Robert R. Raevis

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 is/are allowed.
- 6) ☒ Claim(s) 1-3, 8, 9, 13-16 and 18-24 is/are rejected.
- 7) ☒ Claim(s) 4-7, 10-12 and 25-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

Claims 15,16,18-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 15, isn't the "mandrel" part of the "attachment module"? This claim seems to suggest that they are separate entities, while claims 1 and 24 expressly states that the module includes (comprises) the mandrel.

Claims 1,2,9,15,23,24 are rejected under 35 U.S.C. 102(b) as being anticipated by Sidey.

As to claims 1,15,23,24, Sidey teaches an apparatus, including: penetrating tip member 16 configured to penetrate soil; and attachment structure coupled to the tip member, the structure including a casing 64 (i.e. mandrel) on which structure is mounted, the casing including piezo-sensor 20 and friction structure 62 that retains the sensor and thus serves as a sleeve, the sensor capable of obtaining in situ measurement of pore pressure at a location corresponding proximal to the mandrel 64 (note the radial apertures 128, which abut the bottom surface of the mandrel). The sleeve has an inherent roughness that permits for the sleeve to be pushed into the soil (via pump 30), the sensor of the mandrel being capable of measuring in situ pressure from the induced shearing of the soil.

As to claim 1, the casing 64 serves as a mandrel (see: definition of "mandrel"), and structure 62 serves as a sleeve (see: definition "sleeve"). In addition, elements 62,20,64 provide for a replaceable module, separated from the remainder of the system by only the electrical lines 82.

As to claim 2, note the electrical components of Figure 7.

As to claim 9, note recorder 26.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sidey as applied to claim 1 above, and further in view of Cooper et al.

As to claim 3, it would have been obvious to classify Sidey tip as a CPT tip because it is "used to classify soils and characterize sites" (col. 1, line 14, of Cooper et al.).

Claims 13,14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidey in view of Cooper, as applied to claim 3 above, and further in view of Kram.

As to claim 13, Kram's data acquisition system 21 includes "depth" (col. 3, line 52, and Figure 7) determinations, "inclinometer" (col. 4, line 14), and printer 27/monitor 29 for display of data, suggestive of usage in Sidey which already has a recorder 26.

As to claim 14, Kram converts data into "digital" (col. 3, line 51) for storage. Storage of a variety of data parameters into a single memory is routinely done so via MUX components.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sidey in view of Kram.

As to claim 8, Kram relates data to "depth" (col. 3, line 52) measurements, suggestive of such in Sidey.

Claims 20,21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidey as applied to claim 15 above, and further in view of Kram.

As to claim 20, Kram's data acquisition system 21 includes "depth" (col. 3, line 52, and Figure 7) determinations, "inclinometer" (col. 4, line 14), and printer 27/monitor 29 for display of data, suggestive of usage in Sidey which already has a recorder 26.

As to claim 21, Kram converts data into "digital" (col. 3, line 51) for storage. Storage of a variety of data parameters into a single memory is routinely done so via MUX components.

Claims 4-7,10-12,25-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raevis whose telephone number is 571-272-2204. The examiner can normally be reached on Monday to Friday from 7am to 4pm. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



RAEVIS